

CHIZHOVA, V.A.

Correlation of various facies of oil and gas-bearing sediments
in the Ural-Volga region based on the stages in faunal develop-
ment. Neftegaz.geol. i geofiz. no.7:1-45 '65.

(MIRA 18:8)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut.

CHIZHOVA, V.A.

Evolution of Late Devonian and Early Carboniferous Ostracoda
in the Russian Platform. Biul. MOTP Otd. 40 no. 6:149-150 '65.
(MIRA 19:1)

1. Submitted May 7, 1965.

CHIZHOVA, V.A.

Orientation of the shells in Palaeocopida. Paleont. zhur.
no.3:73-83 '65.
(MIRA 18:9)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut.

CHIZHCHIA, I. A.
SEMINIKHATOV, S.V.; *CHIZHOVA, V.A.*

Stratigraphic correlation of the Tournaisian and the lower Visean
stages in the Mikhaylovskoye uplift (southeastern section of the
Dnieper-Donets Lowland). Trudy VNII no.9:53-62 '56. (MIRA 10:1)
(Dnieper Lowland--Geology, Stratigraphic)
(Donets Basin--Geology, Stratigraphic)

CHIZHOVA, V.V., inzh.

Actual conditions for the recreation of fixed assets in the
coal industry. Iss.vys.ucheb.zav.; gor.shur. no.3:75-80
'59. (MIRA 13:4)

1. Moskovskiy gornyy institut imeni I.V.Stalina. Rekomendovana
kafedroy ekonomiki, organizatsii i planirovaniya gornoj promy-
shlennosti.

(Coal mines and mining--Equipment and supplies)
(Mines and mineral resources--Accounting)

SUDOPLOTOV, A.P., doktor tekhn. nauk, prof., red.; YEROFEYEV, V.F.,
otv. red.; VESKOV, M.I., ctv. red.; ARKHIPOV, N.A., red.;
ZHUKOVA, A.P., red.; RYKOVA, Z.L., red.; CHIZHO'A, V.V.,
red.; KUPTSOVA, Ya.M., red.; LEVINA, T.I., red.

[Coal mining without the constant presence of miners at
the working faces; materials] Razrabotka ugel'nykh plastov
bez postoiannogo nakhodcheniya rabochikh v zabe; materialy.
Pod red. A.F.Sudoplatova. Moskva, TSentr. inst. tekhn.
informatsii ugel'noi promyshl., 1960. 251 p.

(MIRA 18:8)

1. Nauchno-metodicheskoye soveshchaniye po izyskaniyu sistem
razrabotki bez postoyannogo nakhodcheniya rabochikh v zabe, Moscow,
1960. 2. TSentral'nyy institut tekhnicheskoy informa-
tsii ugel'noy promyshlennosti (for Kuptsova, Levina, Arkhipov,
Zhukova, Rykova, Chizhova).

CHIZHOVA, V.V.

Study of factors influencing the amortization norm of fixed assets.
Nauch. trudy MGI no.30;103-115 '60. (MIRA 14:3)
(Coal mines and mining--Finance) (Amortization)

PETRENKO, P.V.; EL'KIN, I.L.; KAZAKOV, S.S.; VOZHIK, D.L.; DENISOV,
V.V.; PUCHKOV, V.I.; BOGUTSKIY, N.V.; SAVEL'YEV, I.P.;
KOLENTEV, M.T.; MERKULOV, N.Ya.; VERKLOV, V.A.;
OVSYANNIKOV, P.A.; SOSNOV, V.D., otv. red.; CHIZHOVA, V.V.,
otv.red.; ZHUKOVA, A.P., red.; LEVINA, T.I., red.; PRONINA,
N.D., tekhn. red.; OVSEYENKO, V.G., tekhn. red.

[Practice of using cutterloaders] Opyt ispol'zovaniia ochi-
stnykh kombainov; sbornik statei. Moskva, 1962. 102 p.
(MIRA 16:2)

I. TSentral'nyy institut tekhnicheskoy informatsii ugol'noy
promyshlennosti.

(Coal mining machinery)

L 00557-66 EWT(m)/EWA(d)/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) IJP(c)
JD/HW

ACCESSION NR: AP5019944

UR/0133/65/000/008/0706/0707
669.18-412 : 621.746.753

AUTHORS: Borodulin, A. I.; Smolyarenko, D. A.; Sivtsov, G. V.; Chizhova, V. Ya.

TITLE: Improving the quality of metal for cold-rolled sheet metal

SOURCE: Stal', no. 8, 1965, 706-707

TOPIC TAGS: sheet steel, steel pouring, steel foundry, deep drawing steel

ABSTRACT: Some of the reasons why Cherepovets steel is superior to others for deep-drawing are discussed. The factory uses ore containing 62% Fe (to be raised to 63% in 1965) and coke containing to 0.55% S (compared with normal 1.6-1.8%) to obtain only 0.018% S in the cast iron (to be lowered to 0.015-0.017%). Fuel consumption (natural gas) in 1964 was 136 kg/ton. C content in medium and large capacity furnaces is taken as 0.35-0.80 and 0.25-0.70% respectively, while cast iron consumption (containing 0.40% Si, 0.25% Mn) is 55-58%. The steel produced for deep-drawing corresponds to stricter limitations on chemical composition (imposed within the factory) than those established by GOST specifications (primarily, smaller % of Si, P, and S). Since the heating of the ingredients was found to be a major factor in steel quality, the following order is used: agglomerate is uniformly loaded on the tundlings and covered with lime. The charge is heated 7-10 minutes and scrap is

L 00557-66

ACCESSION NR: AP5019944

loaded at 3 tons/min to speed the melting. Since the S content remains essentially constant through the melting operation (small amounts only are removed in slag), the charge must consist of materials containing little S. The Mn/S ratio has to be substantially above 12 (around 20-30). The metal temperature is kept at 1530-1600°C while the slag temperature should not drop below 1580°C. Speed pouring through 60-70 mm spouts (12 tons/min) results in 1.45% increased yield of class I metal compared with normal pouring through 30 mm spout (2.5 t/min). I. M. Konovalov, E. V. Tkachenko, K. I. Zhurkin (Cherepovets); V. N. Gasilina, K. A. Kapustin (TaNIIChM) participated in the work. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: Cherepovetskiy metallurgicheskiy zavod (Cherepovets Metallurgical Factory); TaNIIChM

SUBMITTED: 00

ENCL: 0)

SUB CODE: MM

NO REF Sov: 000

OTHER: (00)

Card 2/2

CHIZHOVA, Yu.I.

SIGAL, M.Z., kandidat meditsinskikh nauk, assistent; CHIZHOVA, E.I.,
assistent

Reactions of epidermodermal grafts to roentgen irradiation. Vest.
rent. i rad. no.5:33-37 S-0 '54. (MLRA 7:12)

1. Iz kafedry rentgenologii (sav. prof. M.Kh. Fayzullin) i onkolo-
gicheskogo otdeleniya (sav. saslushennyj deyatel' nauki prof.
Yu.A.Ratner) kafedry khirurgii Kazanskogo instituta usovremenstvo-
vaniya vrachey imeni V.I.Lenina.
(ROENTGEN RAYS, effects,
on skin grafts)
(SKIN TRANSPLANTATION,
eff. of x-ray on skin grafts)

CHIZHOVA, Z. I.

CHIZHOVA, Z. I.: "Allowance for processing under conditions of conveyorization and automation of the furniture industry." Min Higher Education USSR. Leningrad Order of Lenin Forestry Engineering Academy imeni S. M. Kirov. Leningrad, 1956. (Dissertation for the Degree of Candidate in Technical Sciences).

Source: Knizhnaya letopis' No. 28 1956 Moscow

DOLGOV, A.I.; CHIZHOVA, Z.I.

Jointers for assembling frames. Der.prom. 8 no.1:13-14
Ja '59. (MIRA 12:1)
(Jointer (Woodworking machine))

"APPROVED FOR RELEASE: 06/12/2000

CIA-RDP86-00513R000308920010-8

CHIZHOVA, Z. P.

Dissertation: "Therapeutic Gymnastics and Massage in the Comprehensive Treatment of Acute Pneumonia in Children up to One Year Old." Cand Med Sci, Second Moscow State Medical Inst imeni I. V. Stalin, Moscow, 14 Jun 54. (Meditinskiy Rabotnik, Moscow 4 Jun 54)

SO: SUM 318, 23 Dec. 1954

APPROVED FOR RELEASE: 06/12/2000

CIA-RDP86-00513R000308920010-8"

EXCERPTA MEDICA Sec 7 Vol 13/10 Pediatrics Oct 59

2638. MEDICAL GYMNASTICS AND MASSAGE IN THE COMPLEX THERAPY
OF ACUTE PNEUMONIA IN CHILDREN UP TO ONE YEAR OLD (Russian
text) - Chizhova Z.P., Moscow - SOVETSK. MED. 1958, 3 (47-53)

For 3 phases of pneumonia (acute phase, amelioration of the disease and convalescence) in infants, groups of exercises and massage are recommended. For every phase of the disease, 2 groups of exercises are described. For the acute phase, for instance, these consist in holding the infant on the attendant's arm in the vertical position for 5-10 min., 8-10 times daily; changing the infant's position frequently in the cot; and abdominal massage for 1-2 min., 4-5 times daily, 40-50 min. after feeding. The 2nd physiotherapeutic complex for the first phase of the disease embraces 6 procedures, and the 6th complex for convalescents 23. This treatment has a favourable influence on the course of the disease and the condition of the patient.

Najman - Zagreb (L, 7, 15)

CHIZHOVA, Z.P., kand.med.nauk; PROLOVA, G.S.

Toxoplasmosis in a two-year old child. Sov.med. 23 no.10:137-139
O '59. (NIRA 13:2)

1. Iz kliniki gospital'noy pediatrii (zaveduyushchiy - prof. K.F. Popov) II Moskovskogo meditsinskogo instituta imeni N.I. Pirogova i iz patologoanatomiceskogo otdeleniya (zaveduyushchiy N.I. Soboleva) detskoj bol'nitsy imeni N.F. Filatova (glavnnyy vrach N.N. Kalugina).

(TOXOPLASMOSIS in inf. & child.)

MAZURIN, A.V.; SOBOLEVA, N.I.; CHIZHOVA, Z.P.

Two observations of diffuse lymphosarcoma of the gastrointestinal tract in children. Pediatrilia 37 no.5:85-86 My'59 (MIRA 12:8)

1. Iz kafedry propedevtiki detskikh bolezney (zav. - prof. V. A. Vlasov) i gospital'noy pediatrii (zav. - prof. K.F. Popov) II Moskovskogo meditsinskogo instituta im. prof. N.I. Pirogova na baze Detskoy klinicheskoy Bol'nitsy im. N.F. Filatova (glavnnyy vrach M.N. Kalugina).
(GASTROINTESTINAL SYSTEM, neoplasmas
lymphosarcoma, in child. (Rus))
(LYMPHOSARCOMA, case reports
gastrointestinal, in child.. (Rus))

CHIZHOVA, Z.P., kand.med.nauk; ARKHIREYeva, V.A.

Two cases of lymphogramulomatosis in early childhood with disease
of the skin. Pediatrilia 37 no.11:64-67 N '59. (MIRA 13:3)

1. Iz kafedry gospital'noy pediatrii (zaveduyushchiy - prof. K.F.
Popov) II Moskovskogo meditsinskogo instituta imeni N.I. Pirogova
na baze detskoy klinicheskoy bol'nitsy imeni N.F. Filatova (glavnnyy
vrach M.N. Kalugina).

(HODGKIN'S DISEASE in inf. & child.)
(SKIN pathology)

CHIZHOVA, Z.P., kand.med.nauk

Course of erythromyelosis in children. Vop.okh.mat.i det. 7
no.9:77-79 S '62. (MIRA 15:12)

1. Iz kafedry gospital'noy pediatrii (zav. - prof. K.F.Popov)
II Moskovskogo meditsinskogo instituta imeni N.I.Pirogova.
(HEMOPOIETIC SYSTEM—DISEASES)

CHIZHOVA, Z.P., kand. med. nauk; IVANOVA, V.D.

Disorders of tryptophan metabolism in children with leukemia.
Pediatriia 41 no.10:10-15 0 :62. (MIRA 17:2)

1. Iz kafedry gospital'noy pediatriii (zav. - prof. K.F. Popov) II Moskovskogo gosudarstvennogo meditsinskogo instituta imeni Pirogova na baze Detskoy bol'nitsy imeni N.F. Filatova, Moskva i radiologicheskoy laboratorii (zav. - prof. M.O. Raushenbakh) Tsentral'nogo instituta hematologii i perelivaniya krovi.

CHIZHSKAYA, G. Ya.

GULYY, M.F., akademik; PSEMICHENYY, F.D., akademik; VASILENKO, D.Ya.,
kand.sel'skokhozyaystvennykh nauk; ZHADAN, A.V.; CHIZHSKAYA, G.Ya.

Stimulating the formation of butterfat in cows by diversified
rations containing brewer's yeast. Zhivotnovodstvo 19 no.12:34-36
D '57. (MIRA 10:12)

1.Ukrainskaya akademiya sel'skokhozyaystvennykh nauk i Institut
biokhimii AN USSR.

(Cows--Feeding and feeding stuffs)
(Yeast)

CHIZHSKAYA, G. YA.

USER / Farm Animals. Cattle.
 Abs Jour : Ref Zhur - Biologiya, No 2, 1959, No. 7356
 Author : OULTY, M. P.; Feshenichny, P. D.; Vaylenko,
 D. Ya.; Belsukova, M. K.; Zhdanov, A. N.;
 Kurbatov, V. I.; Osankova, N. M.; Chish-
 leva, G. Ya.; Shavchenko, N. I.
 Inst : Not Given
 Title : Ways of Raising the Milk's Fat Content in
 Cows
 Orig Pub : Vestn. s.-kh. nauk., 1957, No 8, 61-50

Abstract : In repeated experiments it was established
 that when brewer's yeast (3.3 liters per
 head daily) was temporarily fed to cows
 their milk's fat content became increased
 (by 0.15 percent on the average) for a compa-
 ratively long time. When they were fed bro-

Card 1/2

H.F
 wort's yeast and then sulfuric acid ammonia
 (60-75 g per cow daily, the milk's average
 fat content was additionally increased by
 0.20-0.25 percent.

Card 2/2

CHIZHSKIY, A. F.

27785. CHIZHSKIY, A. F. — Uskoreniye sushki keramicheskikh izdelyi. Mest. Stroit. Materialy, 1948, Vyp. 10, S. 25-33

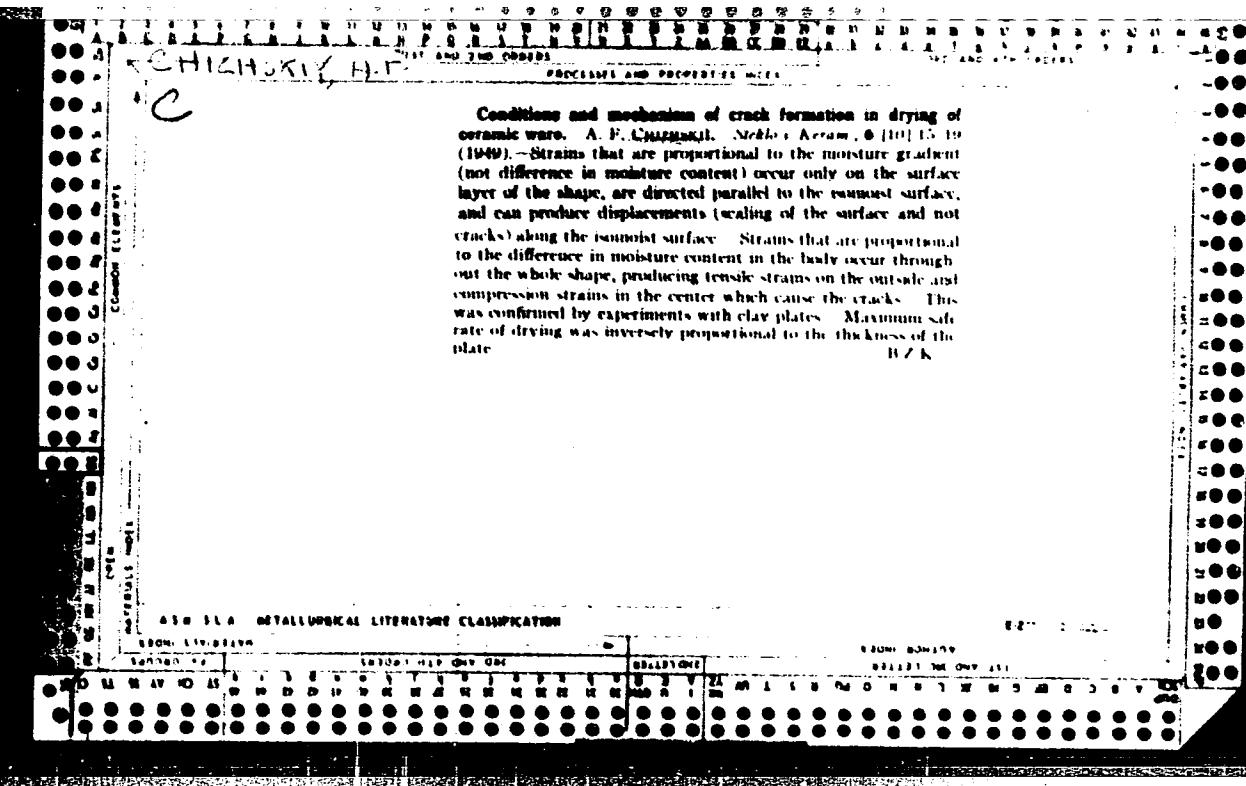
SO: Lëtopis' Zhurnal'nykh Statey, Vol. 37, 1949.

K. CHIKITSKIV, B.F.

PROCESSES AND PROPERTIES INDEX

C

Advances in theory and practice of drying ceramic ware.
A. F. CHIKITSKIV, *Nobie i Keram.*, 6 (3) 17-21 (1960).
The maximum allowable safe rate of drying, M_{\max} , which will not cause cracking of the ware is determined from
$$M_{\max} = 4 \times D \times \Delta C_{\max}/S$$
, where D = coefficient of diffusion of moisture in cm.²/sec., S = thickness in cm., and ΔC_{\max} = maximum allowable difference between moisture concentrations in the center and on the surface. The M_{\max} of two different types of clays was determined experimentally. It was also established that the formation of cracks occurred during the first period of drying (during shrinkage), while during the second period of drying (decreasing rates of drying) no additional cracks were formed. In solving problems on drying, it is essential to have the value of D , particularly for the period of constant rate of drying. For a moisture content of 22 to 90%, D does not depend on moisture. It can be assumed that D depends only on the temperature and the nature of the clay, and, for the first period of drying, it will be determined from $D = K_c \times t^{\alpha} = K_c [0.03(t_s + 10)]$ cm.²/sec., where K_c = a constant for the given type of clay, ν = kinematic viscosity of the water, and t_s = temperature of the surface of the clay. The values of K_c for two different types of clays were determined. B.Z.K.



CHIZHSKIY, A.F.

36744. Mekhanizm i usloviya vozniknoveniya treshchin pri suske keramiki.
Steklo i keramika, 1949, No. 10, c. 15-19,

SO: Letopis' Zhurnal'nykh Statey, Vol. 50, Moskva, 1949

2383. The sensitivity of days to drying—A. F. CICHINSKI (Glass & Ceramics, Moscow)
The author recommends that the "coefficient of sensitivity" of
the glass be determined by the equation $K_s = (1 - W_2)/W_1$, in which

W₁ = weight of dried sample in g.
W₂ = weight of sample after being dried at 100°C for 24 hours.
The coefficient K_s is plotted as a straight line on a graph with time in hours on the x-axis and the point of interest on the y-axis. The graph is plotted for the period 0-24.

Approximate value of M_s = $(1 - W_2) \times 10^{-3}$ g m⁻² sec⁻¹. This value is
expressed as $M_s = M_s^0 \exp(-K_s t)$.

where t = time in hours and $M_s^0 = 2.24 \times 10^{-3}$

USSR/ Minerals

Card 1/1 Pub. 104 - 5/11

Authors : Chizhskiy, A. F.

Title : Sensitivity of clay to desiccation

Periodical : Stek. i ker. 4, 11-15, Apr 1954

Abstract : The sensitivity of clay to desiccation depends upon the following natural properties of the material: mineralogical composition, shrinkage during desiccation, plasticity, pore size, degree of dispersion of clay particles and the number of alkali element cations on the surface of clay particles. Any increase in the number of Na^+ cations is followed by an increase in plasticity of the clayey dough. An increase in clay temperature reduces its desiccation sensitivity. The critical moisture of clay is determined by the magnitude of the linear shrinkage of the clay. Formula determining the sensitivity coefficient of clay toward desiccation, is described. Four USSR references (1933-1949). Tables; diagrams.

Institution:

Submitted:

CHIZHEVSKIY, A. F.

CHIZHEVSKIY, A.F., kand. tekhn. nauk.

Causes of fine cracks in dried ceramic materials. Nov. v stroi. tekhn.,
no. 5:90-99 '54. (MIRA 10:11)

1. Kiyevskiy ordena Lenina Politekhnicheskij institut.
(Ceramic materials--Testing)

GINZBURG, D.B., direktor tekhn. nauk; DELIKISHKIN, S.N., kand. tekhn. nauk;
KHODOROV, Ye.I., kand. tekhn. nauk; CHIZHSKII, A.F., inzh.;
BUDNIKOVA, P.P., red.; SMIRNOVA, I., red.; PANOV, L., tekhn. red.

[Furnaces and drying apparatus for the silicate industry] Pechi i su-
shila silikatnoi promyshlennosti. Pod red. P.P. Budnikova. Moskva,
Gos. izd-vo lit-ry po stroit. materialam, 1949. 483 p.
(MIRA 15:1)

1. Deystvitel'nyy chlen AN USSR (for Budnikova).
(Kilns)

CHIZHSKII, Anatoliy Fedotovich

GINZBURG, David Borisovich, doktor tekhnicheskikh nauk; DMLIKISHKIN, Sergey Nikolayevich, kandidat tekhnicheskikh nauk; KHODOROV, Yevgeniy Iosifovich, kandidat tekhnicheskikh nauk; CHIZHSKII, Anatoliy Fedotovich, kandidat tekhnicheskikh nauk; ZIMIN, V.N., dotsent, retsensent; KUZYAK, V.A., dotsent, retsensent; BOKRATYAN, K.A., kandidat tekhnicheskikh nauk, retsensent; IVANOV, A.N., dotsent, retsensent [deceased]; BUDNIKOV, P.P., redaktor; FRADKIN, A.Ye., kandidat tekhnicheskikh nauk, nauchnyy redaktor; GOL'DENBERG, L.G., inzhener, nauchnyy redaktor; GLEZAROVA, I.L., redaktor; GLADKIHKH, N.N., tekhnicheskiy redaktor

[Furnaces and driers in the silicate industry] Pechi i sushila silikatnoi promyshlennosti. Izd. 2-oe, perer. Pod red. P.P.Budnikova. Moskva, Gos. izd-vo lit-ry po stroit. materialam, 1956. 455 p.
(MIRA 10:3)

1. Deystvitel'nyy chlen Akademii nauk USSR (for Budnikov)
(Kilns) (Clay industries)
(Drying apparatus)

GINZBURG, David Borisovich, doktor tekhn. nauk; DELIKISHKIN, Sergey Nikolayevich, kand. tekhn.nauk; KHODOROV, Yevgeniy Iosifovich, kand. tekhn. nauk; CHIZHSKIY, Anatoliy Fedorovich, kand. tekhn. nauk; BUDNIKOV, P.P., akademik, red.; DORROKHOTOV, N.N., akademik, nauchn. red.[deceased]; KOSYAKINA, Z.K., red.; BOROVNEV, N.K., tekhn. red.

[Kilns and drying apparatus for the silicate industry] Pechi i sushilki silikatnoi promyshlennosti. [By] D.B.Ginzburg i dr. Izd.3., perer. Moskva, Gosstroizdat, 1963. 342 p.
(MIRA 17:2)

1. Akademiya nauk Ukr. SSR (for Budnikov).

BARENBOYM, A.M., kand. tekhn. nauk; GALIYEVA, T.M., inzh.;
GINZBURG, D.B., prof.; GRISSIK, A.M., inzh.; ZIMIN, V.N.,
dots.; KUSYAK, V.A., kand. tekhn. nauk; RUTMAN, E.M.,
inzh.; KHODOROV, Ye.I., kand. tekhn. nauk; CHIZHSKIY,
A.F., kand. tekhn. nauk.

[Heat calculations for furnaces and dryers of the silicates
industry] Teplovye raschety pechei i sushilok silikatnoi
promyshlennosti. Izd.2., perer. i dop. Moskva, Stroiz-
dat, 1964. 495 p. (MIRA 17:12)

ACC NR: AT7007633

SOURCE CODE: UR/0000/66/000/000/0037/0043

AUTHOR: Tyumin, I. A.; Yefimov, B. A.; Chizhukhin, G. N.

ORG: none

TITLE: Series of logic circuits using biax-type elements

SOURCE: Vsesoyuznoye soveshchaniye po magnitnym elementam avtomatiki i vychislitel'noy tekhniki. 10th, Kaunas, 1964. Magnitnyye elementy vychislitel'noy tekhniki (Magnetic elements in computer engineering); trudy soveshchaniya, pt. 2. Moscow, Izd-vo Nauka, 37-43

TOPIC TAGS: logic circuit, magnetic circuit, switching circuit

ABSTRACT: Design and operation is described of a series of logic circuits based on biax elements made from VT-5 ferrite material and measuring 1.2 x 1.2 x 1.7 mm with 0.5 x 0.5 mm apertures. The circuits were tested using a pulse generator, and output signals were amplified by a P608A transistor amplifier capable of delivering 0.5 amp to a load. The following logic circuits were tested and optimum parameters measured: 1) NOT circuit: optimum read, write, and input currents are 0.4, 0.35, and 0.15 amp, respectively; output S/N is 25. 2) NOR circuit: read and write currents on both 0.35-0.4 amp, inhibit current is 0.15 amp; output voltage S/N is 35. 3) NAND circuit: optimum write, inhibit, and read

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UDC: none

ACC NR: AT7007633

currents are 0.3, 0.2, and 0.5 amps; output voltage S/N is 26. 4) HALF-ADDER with parallel write is capable of adding two numbers in 1 usec using 5 NOT and 1 NOR circuit. No other characteristics are given. Among the advantages cited for biax elements are their high S/N ratio, speed, reliability, and simplicity of design. The disadvantages are the necessity of signal amplification and lack of these elements because they are not mass produced. Orig. art. has: 5 figures. [BD]

SUB CODE: 09/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 001

Card ... 2/2

54869-5A

BT(d)/BT(e)/BT(f)-2/BP(1)/BP(2)/BP(3)/BP(4)/BP(5)/BP(6)/BP-2/

BMP(b)/BMP(1)/BMP(c). Pg-4/Pf-1/Pad/Pg-4/Pk-4
ACCESSION NR: AF50138-2

TP(-) BB/JD/HW/35(G)
UR/0103/65/026/005/0938/0042
68..142.1

AUTHOR: Bovarchenkov, M. A.

theory, analysis, design and manufacture of magnetic elements of automation and control systems, and the influence of magnetic elements on magnetic elements of automation and control systems.

SOURCE: Avtomatika i telemekhanika, v. 26, no. 5, 1965, 938-942

TOPIC TAGS: electric engineering conference, magnetism conference, computer component, automation equipment, automation, electronic data processing.

ABSTRACT: The Ninth All-Union Conference on Magnetic Elements of Automation and Control Systems was held in Vilnius from 5 to 10 May 1965. The conference was organized by the Institute of Physics and Electrical Engineering of the Academy of Sciences of the Lithuanian SSR, the Lithuanian Scientific and Technical Society, the Ministry of Instrument Building Industry, and the Institute of Automation and Telemechanics of the Main Committee of Instrument Building, Means of Automation, and Control Systems under Gosplan and the Academy of Sciences USSR. About 450 participants discussed some 90 reports concerning the theory, design,

Card 1/5

L. A. AKENOV
ACCESSION NO. A9200752

THEORY AND PRACTICE OF DESIGNING

TELEVISION AND RADAR SYSTEMS. M. A. RODIN, et al.

The book contains a number of important and promising technical material on the theory and practice of problems of designing television and radar systems.

CONTENTS
INTRODUCTION
1. TELEVISION SYSTEMS
2. RADAR SYSTEMS
3. TELEVISION AND RADAR SYSTEMS

This paper is being made available together with M. A. Akenov's paper.

It is recommended that it be used as a reference book by engineers and scientific workers in the field of television and radar systems.

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ASSOCIATION: none

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INTERVIEWER: DO

OTHER: 000

Card *On*
Card 5/5

APPROVED FOR RELEASE: 06/12/2000

CIA-RDP86-00513R000308920010-8"

CHIZHURCV, A. A.

12

29735

Engineering
Ingers, Electric
Dielectrics

"High Frequency Apparatus for Drying Dielectrics," A.
A. Chizhurcv, Eng., Kovrov, Vladimir Oblast, 2 pp

"Elektrichesvo" No 9

IA 29735
Presents a schematic diagram of a high frequency generator for drying lumber. Shows photographs of boards suffered by wood which has been dried by high frequencies. The editor states that the author has not had too much experience in drying lumber by means of high frequencies, and that much better operational and more economical results might have been obtained

29735

12
Engineering (Contd)

Aug 1967

if the author had conducted his experiments on wood drying by using frequencies of the middle ranges.

CHIZHEVSKIY, V., inzh.-polkovnik; BIRYUKOV, N., inzh.-podpolkovnik; GALINSKIY,
V., inzh.

Determining the exact site of a hit. Voen.vest. 39 no.4:82-87 Ap
'60. (MIRE 14:2)

(Targets (Military science))

BUNDEL', A.A.; POPOV, M.P. [deceased]; CHIZHUNOVA, Yu.A.

Luminescence of screens subjected to short exposures. Trudy Tsentr.
nauchnissl.inst.rentg. i rad. 9:46-58 '55. (MIR 9:12)
(RADIOGRAPHY) (LUMINESCENCE)

POPOV, M.P. [deceased]; CHI2HUNOVA, Yu.A.

Investigating thermal conditions of oil-immersed X-ray tubes. Trudy
TSentr.nauch.issl.inst.rentg. i rad. 9:59-70 '55. (MIRA 9:12)
(X RAYS--APPARATUS AND SUPPLIES) (ELECTRON TUBES)

CHIZHUNOVA, Yu.A.

Evaluating the rate of heat input in oil-immersed X-ray tubes. Trudy
TSentr.nauch.issl.inst.rentg. i rad. 9:71-76 '55. (MIRA 9:12)
(X RAYS--APPARATUS AND SUPPLY) (ELECTRON TUBES)

BUNDEL', A.A.; POPOV, M.F. [deceased]; CHIZHUNOVA, Yu.A.

Relation between postluminescence of sulfide screens and their working
conditions. Trudy TSentr.nauchn.issl. inst.rentg. i rad. 9:137-145 '55.

(MIRA 9:12)

(RADIOGRAPHY) (LUMINESCENCE) (ZINC SULFIDE)

POPOV, M.F. [deceased]; CHIZHUNOVA, Yu.A.

Investigating the focus of diagnostic X-ray tubes. Trudy TSentr.
nauch.issl.inst. rentg. i rad. 9:201-208 '55. (MLRA 9:12)
(ELECTRON TUBES) (X RAYS--APPARATUS AND SUPPLIES)

Ch: Zhurnev, Yu.A.

Category : USSR/Optics - X Rays

K-8

Abs Jour : Ref Zhur - Fizika, No 2, 1957, № 5262

Author : Popov, M.F., Chizhunova, Yu.A.

Title : Investigation of the Focus of Diagnostic X-ray Tubes

Orig Pub : Tr. Tsentr. n.-i. ik-ta rentgenologii radiologii, 1955, 9, 201-208

Abstract : Description of a procedure of photographing the foci of x-ray tubes and an indication that it is possible to obtain comparable results under standard conditions. The photography of the focus was carried out without an amplifying screen in natural size with the aid of a camera having a 0.2 mm diameter and a movable cassette for 4 -- 6 photographs. The photographs were subjected to photometric measurements and the size of the focus was determined by the rectification method after deducting twice the diameter of the camera diaphragm. It was established that no changes in the dimensions of the focus are observed when the current through the tube is varied up to 50 ma and the voltage is varied up to 90 kv. No changes in the dimensions of the focus were observed also for tubes with rotating anodes in motion.

Card : 1/1

Chishunova, Yu. A.

48-4-33/48

SUBJECT: USSR/Luminescence

AUTHORS: Bundel' A.A., Popov M.F. and Chishunova Yu.A.

TITLE: Luminescence of Luminophores of Various Types Excited by Short Pulses (Svetcheniye luminoforov razlichnykh tipov pri vozbuzhdenii korotkimi impul'sami)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1957, Vol 21, #4, pp 555-556 (USSR).

ABSTRACT: The maximum brightness of luminescence attained by the excitation end at pulse excitation must vary proportionally to the square of the exciting pulse power for luminophores with recombination luminescence and proportionally to the first power for luminophores with discrete luminescent centers. This was experimentally checked with an oscilloscope at the excitation with X-ray pulses lasting from 2.6×10^{-5} to 1.5×10^{-3} sec for the following luminophores: ZnS₅₅, CdS₄₅-Ag (2×10^{-4}); 1.7ZnO₂-SiO₂-Mn (3×10^{-3}) and CaWO₄.

It was discovered that the maximum brightness of all luminophores, independently of the luminescence mechanism, at a given

Card 1/2

CHIZHUNOVA, Yu.A.

Effect of operating conditions on the heating of X-ray tubes. Vest. rent. i rad. 33 no.2:71-74 Mr-Mg '58. (MIRA 11:6)

1. Iz laboratorii apparatov i trubok (zav. - kandidat tekhnicheskikh nauk V.V.Dmokhovskiy) Gosudarstvennogo nauchno-issledovatel'skogo instituta rentgenologii i radiologii (dir. - dotsent I.G.Iabunova) Ministerstva zdravookhraneniya RSFSR.

(ROENTGEN RAYS

eff. of position on warming of x-ray tubes (Rus))

"APPROVED FOR RELEASE: 06/12/2000

CIA-RDP86-00513R000308920010-8

CHIZHNIKAYTE, Ye.

"Investigating the Process of Peat Extraction from Baltoi Voke Deposits and the Products Obtained." Cand Chem Sci, Inst of Chemistry and Chemical Technology, Acad Sci Lithuanian SSR, Vil'nyus, 1954. (KL, No 1, 1955)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (13)
SO: Sum. No. 598, 29 Jul 55

APPROVED FOR RELEASE: 06/12/2000

CIA-RDP86-00513R000308920010-8"

BITAUTAS, I. [Bytautas, I.] inzh.; CHILHYUS, I. [Čilius, I.], inzh.

Using wood concrete in building. Sel'. stroi. 13 no.6:5-6 Je '58.
(MIRA 11:6)
(Lithuania--Concrete) (Lithuania--Wood waste)

"APPROVED FOR RELEASE: 06/12/2000

CIA-RDP86-00513R000308920010-8

SHILIK, IVAN ANDREEVICH

N/5
852-3
.05

Pitatel 'Nest' Mestnykh Kornov (Severo-Zapadnoy Zony SSSR) (Nutritive Value of Local Food; North-Western Zones of the USSR) Moskva, Sel'Khoziz, 1956.
182 P. Tables.

AV

APPROVED FOR RELEASE: 06/12/2000

CIA-RDP86-00513R000308920010-8"

CHIZMADZHEV, I. A.; CHIRKOV, Yu. G.; BURSHTEYN, R. Kh.; MARKIN, V. S.;
~~PSHENICHNIKOV, A. G.~~

"Investigation of the Relationship between the Structure and the
Electrochemical Properties of a Porous Gas Electrode."

Report presented at the 14th meeting CITCE, Intl. Comm. of Electrochemical
Thermodynamics and Kinetics, Moscow, 19-25 Aug 63.

Institute of Electrochemistry, Academy of Sciences of USSR.

CHIZKOV, S.I.

Copper alloys for bimetals. Izv. vys. ucheb. zav.; usvet. met. 5
no.5:123-131 '62. (MIRA 15:10)

1. Moskovskiy institut stali, kafedra obrabotki metallov davleniyem.
(Laminated metlas) (Copper alloys)

SOV/35-59-8-6693

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959,
Nr 8, p 84

AUTHOR: Chizhmakov, A.F.

TITLE: Recalculation of Coordinates of Points With Partial Origins
Into a United System

PERIODICAL: Zap. Voronezhsk. s.-kh. in-ta, 1958, Vol 27, Nr 1, pp 59 - 64

ABSTRACT: At the present time, especially in connection with the work on
compiling composite maps of districts, the necessity arose of
uniting separate materials, not connected with the state net-
work, concerned with the geodetic substantiation of the plans of
individual land-tenures. It is recommended to make conjunction
of at least two points with distribution of directional angles
between two lines, while recalculating partial coordinates of
individual traverses of district borders into a united system.
This makes it possible to calculate the turning angle of the

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SOV/35-59-8-6693

Recalculation of Coordinates of Points With Partial Origins Into a United System

old system and the new coordinates of all points of the traverse. Formulae are derived and tables are compiled for calculating corrections to increments of the partial coordinate system.

S.A.N.

Card 2/2

FILINOVSKIY, V. Yu., CHIZMADZHEV, Yu. A.

"Space-time Distribution of Radicals and the Yield of Molecular Products in the Radiolysis of Water With the Presence of Acceptors" p.19

Trudy Transactions of the First Conference on Radioaction Chemistry, Moscow,
Izd-vo AN SSSR, 1958. 330pp.
Conference -25-30 March 1957, Moscow

LEVICH, Veniamin Grigor'yevich; CHIZMADZHEV, Iu.A., nauchnyy sotrudnik,
red.; AKHLAGOV, S.N., tekhn.red.

[Physicochemical hydrodynamics] Fiziko-khimicheskaya gidrodinamika. Izd.2., dop. i perer. Moskva, Gos.izd-vo fiziko-matem.
lit-ry, 1959. 699 p. (NIRA 12:12)
(Hydrodynamics)

5(4)

SOV/76-33-5-23/33

AUTHORS: Logonadze, R. R., Levich, V. G., Chizmadzhev, Yu. A. (Moscow)
TITLE: Calculation of the Electrochemical Protection (Raschet elektrokhimicheskoy zashchity). 1. A Process Determined by the Rate of the Electrochemical Reaction (1. Protsess, opredelyayushchiy sya skorost'yu elektrokhimicheskoy reaktsii)
PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 5, pp 1111 - 1118 (USSR)
ABSTRACT: The system protector - metal is an electrolytical cell. Since the calculation of this system is complicated because of great potential shifts and the effect of concentration polarization, a simplified model is investigated as a first approximation. The concentration polarization is neglected, the metal considered as being weakly polarized, the protector as strongly polarized. The calculation by means of successive approximation shows that in slight intervals the presupposition of the weakly polarized metal becomes unrealizable. A second model (Fig 1) is investigated; a current with a constant density j_0 flows on its projector, a current with a constant density j_1 at both sides, whereas the current density

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Calculation of the Electrochemical Protection.
1. A Process Determined by the Rate of the Electrochemical Reaction

SOV/76-33-5-23/33

becomes zero at a great distance. The potential calculated (Fig 3) is a reasonable approximation for distances from the protector which are great as compared to its dimension. The calculation can be used if the protector has high polarizability whereas the metal has insignificant polarizability. The authors express their gratitude to Academician A. N. Frumkin for setting up the problem and to I. L. Rozenfel'd for judging the investigation. There are 4 figures and 6 references, 5 of which are Soviet.

ASSOCIATION: Akademiya nauk SSSR institut fizicheskoy khimii Moskva
(Academy of Sciences of the USSR Institute of Physical Chemistry, Moscow)

SUBMITTED: November 1, 1957

Card 2/2

5(4)

AUTHOR:

Chizmadzhev, Yu. A.

SOV/20-124-1-40/69

TITLE:

On the Occurrence of Oscillations in the Passage of a Current
Through Electrolytic Systems With Falling Polarization
Characteristic (O vozniknovenii kolebaniy pri prokhozhdenii
toka v elektroliticheskikh sistemakh s padayushchey
polyarizatsionnoy charakteristikoy)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 1, pp 142-145
(USSR)

ABSTRACT:

The present paper investigates phenomena in distributed electrochemical systems which have a polarization curve with falling part sections. A tube of the length $2l$ is investigated as a model of a distributed system; it is filled with an electrolyte and is symmetrically polarized from both ends. The equation for the steady distribution of the potential in the cylindrical system of coordinates has the form

$$\frac{\partial^2 \psi}{\partial x^2} + \frac{\partial^2 \psi}{\partial r^2} + \frac{1}{r} \frac{\partial \psi}{\partial r} = 0. \text{ Next, the boundary condition for}$$

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the tube surface is written down: $-K \left(\frac{\partial \psi}{\partial r} \right)_{r=r_0} = j(\psi).$

On the Occurrence of Oscillations in the Passage of
a Current Through Electrolytic Systems With Falling
Polarization Characteristic SOV/20-124-1-40/69

Here $j(\psi)$ denotes the polarization characteristic of the reaction on the electrode. The author uses the conception of chemical resistance $R_{\text{chem}} = \partial \psi / \partial j$ and investigates the case in which decrease of the potential on the chemical resistance is much greater than the decrease of the potential on the transversal ohmic resistance,

$R_{\text{Ohm}}^{\text{tr}} = r_0 / \chi$. For $R_{\text{Ohm}}^{\text{tr}} / R_{\text{chem}} \ll 1$ the initially written down equation goes over into the equation

$\chi r_0 \frac{d^2 \psi}{dx^2} - j(\psi) = 0$. The equation may be investigated for various kinds of the dependence $j(\psi)$: the linear rising characteristic $j = K\psi$, in the case of an infinite tube polarized at one end, leads to the following current-and potential distribution: 1) $\psi = \psi_1 e^{-\alpha' x}$, $I = \alpha' \psi_1 e^{-\alpha' x}$, $\alpha' = \sqrt{K/\chi r_0}$. 2) The linear falling characteristic $j = K(\psi_0 - \psi)$ for a finite tube leads, if the conditions $\psi|_{x=0} = \psi_1$ and $\frac{d\psi}{dx}|_{x=0} = 0$

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On the Occurrence of Oscillations in the Passage of
a Current Through Electrolytic Systems With Falling
Polarization Characteristic

SOV/20-124-1-40/69

are satisfied, to the potential distribution
 $\psi = \psi_0 - (\psi_0 - \psi_1) [t g \omega' l \cdot \sin \omega' x + \cos \omega' x]$. 3) The range
of weak anodic polarization can be approximated by the function
 $j(\psi) = -K (\psi - \psi_0)^2 + K \psi_0^2$ and also the range with strong
anodic polarization can be investigated in a similar manner.
For every steady distribution stability must, in addition,
be investigated. A steady state in a system may be assumed
to be a periodic or a quasiperiodic process. The author
thanks A. N. Frumkin, Member of the Academy, for raising the
problem and for a useful discussion, and he expresses his
gratitude to V. G. Levich, Corresponding Member, AS USSR,
for supervising the work carried out. There are 3 figures
and 7 references, 6 of which are Soviet.

ASSOCIATION: Institut elektrokhimii Akademii nauk SSSR (Institute for
Electrochemistry of the Academy of Sciences, USSR)

Card 3/4

CHIZMADZHEV, Iu.A. "Can. Phys-Math Sci — (aiss) "Stationary states
of certain electrochemical systems and their stability," **Moscow, 1960,**

8 pp, 140 cop. (**Moscow Engineering-Physical Institute**) (KL, 45-60, 122)

84634

188300 1530,1138,1454

S/076/60/034/010/016/022
B015/B064AUTHORS: Dogonadze, R. R., Levich, V. G., Chizmadzhev, Yu. A.TITLE: Theory of the Electrochemical Protection. II. Reactions With
Diffusion Control 18PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 10,
pp. 2320 - 2327

TEXT: In a previous paper (Ref. 1), the authors determined the distribution of the potential in a system consisting of a metal (cathode) and a protector (anode), however, without taking account of the concentration polarization. In practice, however, metal corrosion frequently takes place in the presence of dissolved oxygen. The oxygen concentration may, however, be so low that the total rate of the corrosion process in the system metal - protector depends on the access velocity of oxygen. The present paper investigates this case. Since the access of oxygen in mixing through the solution (which is mainly the case in practice) depends on the convective diffusion, the most simple case, i.e. the convective diffusion to the surface of a rotating metal disc which is in the center of the

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Theory of the Electrochemical Protection.
II. Reactions With Diffusion Control

S/076/60/034/010/016/022
B015/B064

protector, was chosen. In contrast to the experiments by Wagner (J.Electrochem.Soc. 24, 380,1957), in the present case the diffusion current has the same value in all points of the system. The conditions are discussed under which it is possible to separate the surface of the protected metal into diffusion- and kinetic regions, and the corresponding equations are derived. By means of the Legendre polynomials equations are derived for the case in which the metal can be regarded as non-polarizable in the kinetic region. There are 2 figures and 6 references: 5 Soviet and 1 US.

ASSOCIATION: Akademiya nauk SSSR Institut Elektrokhimii (Academy of Sciences of the USSR Institute of Electrochemistry)

SUBMITTED: February 5, 1959

Card 2/2

SMILGA, V.P.; CHIZMADEHEV, Yu.A.

Steady states of distributed electrochemical systems and
their stability. Dokl.AN SSSR 133 no.3:633-636 Jl '60.
(MIRA 13:7)

1. Institut elektrokhimii Akademii nauk SSSR. Predstavлено
академиком А.Н. Прянишниковым.
(Electrochemistry)

S/020/40/134/002/041/001XX
B004/B067

AUTHORS: Levich, V. G., Corresponding Member of the AS USSR and
Chigmadzhev, Yu. A.

TITLE: Convective Instability in an Electrochemical System

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 2,
pp. 380-383

TEXT: The present work was instigated by the undamped oscillations of the potential of the mercury drop in the range of potential drop and of the current flowing through the drop in the potentiometric reduction of persulfate anion on the dropping mercury electrode. This discovery has been made by A. Ye. Gokhshteyn and A. N. Frumkin (Ref.1). The authors attempted to explain the part played in this effect by a tangential movement on the surface of the Hg drop. They proceed from the simulating scheme shown in Fig. 2: a = radius of the drop; z = axis with respect to which the distribution of ionic concentrations and potentials is invariant, and which depends only on the radius r and the angle θ .

32088

24,7700(1144,1160,1164)

S/181/61/003/012/023/028
B108/B138

AUTHORS: Dogonadze, R. R., and Chizmadzhev, Yu. A.

TITLE: Electrical conductivity of polar crystals with low carrier mobility. I. Structure of energy spectrum

PERIODICAL: Fizika tverdogo tela, v. 3, no. 12, 1961, 3712-3719

TEXT: In semiconductors with low carrier mobility, carrier mobility u rises with temperature approximately as $u \sim \exp(-E^*/kT)$. This dependence bears activation character. In second quantization, the Hamiltonian of a polar crystal has the form

$$H = \frac{p^2}{2m} + U_0 + \frac{\hbar\omega}{2} \sum_k (a_k a_k^\dagger + a_k^\dagger a_k) + \sum_k A_k (a_k^\dagger e^{-ikr} - a_k e^{ikr}), \quad (6)$$

$$A_k = i \left(\frac{2\pi e^2 c \hbar \omega}{k^2 V} \right)^{1/4}. \quad (7)$$

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Electrical conductivity of polar ...

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S/181/61/003/012/023/028
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The problem is solved under the following assumptions: (1) strong interaction between electron and lattice, (2) electrons are considered in strong-bond approximation, (3) the system consists of a fast (electron) and a slow (lattice) subsystem. The solution is found in the form of a linear combination of localized polaron wave functions on the basis of the invariance of the Hamiltonian (6) with respect to translational transformations:

$$\Psi_{\sigma, \dots N_k \dots} = L^{-3/2} \sum_n e^{i \sigma \vec{N}_n} \chi_n(\vec{r} - \vec{n}) \chi_n(\dots N_k \dots) \quad (16)$$

where the $\chi_n(\dots N_k \dots)$ are solutions of the equation, ($J = 0$),

$$(H_{0n} - E) \chi_n = I \sum_i \chi_{n \pm i}; \quad i = 1, 2, 3, \quad (10)$$

with

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Electrical conductivity of polar ...

$$H_{\text{tot}} = \frac{\hbar\omega}{2} \sum_k [(\sigma_k^+ + v_{k\alpha}^*)(\sigma_k^- + v_{k\alpha}) + (\sigma_k^- + v_{k\alpha})(\sigma_k^+ + v_{k\alpha}^*)] + \epsilon_0, \quad (11)$$

$\epsilon_0 = \epsilon_0 - \hbar\omega \sum_k |v_{k\alpha}|^2;$

$$v_{k\alpha} = \frac{A_k}{\hbar\omega} \int |\varphi_n|^2 e^{-i\hbar k r} dv, \quad (12)$$

$$I = - \int \varphi_n^* U(r - \mathbf{r}) \varphi_{n+\alpha} dv. \quad (8)$$

and the eigenfunctions of the Hamiltonian (6)

$$\Psi = \sum_n \chi_n \varphi_n(r), \quad (9),$$

where φ_n is the orbital at the atom n . The polaron energy spectrum is calculated:

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Electrical conductivity of polar ...

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B108/B138

$$E_{\sigma, N_k} = E_N + 2/(\cos \sigma a_1 + \cos \sigma a_2 + \cos \sigma a_3) e^{-\sigma N_k}, \quad (32)$$

$$S(N_k) = 2 \sum_l |v_{lk}|^2 \sin^2 \frac{\hbar k}{2} (2N_k + 1). \quad (33)$$

where $E_N = \epsilon_0 + Q + \frac{1}{2} \hbar \omega \sum_k (2N_k + 1)$. Q is the so-called Coulomb correction to ϵ_0 . Each level $E_{N,\lambda}$ splits into a band of width

$$\Delta E_{\sigma, N, \lambda} = 12 I \exp(-S(N, \lambda)).$$

The 'wave' function $\psi_{N,\lambda}$ in Eq. (16) is only an approximate eigenfunction of the Hamiltonian (6). This leads to the $\delta-\omega$ scattering whose probability will be calculated in the second part of this work (δ = quasimomentum). The authors thank V. G. Levich, Corresponding Member

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Electrical conductivity of polar ...

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B108/B138

AS USSR, V. L. Banch-Burevich, V. M. Galitskiy, S. I. Pekar, and S. V. Tyablikov for advice and discussions. Academician A. F. Ioffe (FTT, 1, 1, 1959) is mentioned. There are 1 figure and 9 references: 4 Soviet and 5 non-Soviet. The four most recent references to English-language publications read as follows: J. Yamashita, T. Kurosawa. J. Phys. Chem. Sol., 5, 34, 1953; H. Fröhlich, G. L. Sewell. Proc. Phys. Soc., 74, 643, 1959; J. Yamashita, T. Kurosawa. J. Phys. Soc. Japan, 15, 802, 1960; R. Kubo, Y. Toyozawa. Progr. Theor. Phys., 13, 160, 1955.

ASSOCIATION: Institut elektrokhimii AN SSSR Moskva (Institute of Electrochemistry AS USSR, Moscow)

SUBMITTED: March 18, 1961 (initially) July 11, 1961 (after revision)

Card 5/5

24,7700 (1144, 1160, 1164)

32089
S/181/61/003/012/024/028
B108/B138

AUTHORS: Dognadze, R. R., Chernenko, A. A., and Chizmadzhev, Yu. A.

TITLE: Electrical conductivity of polar crystals with low carrier mobility. II. Calculation of mobility

PERIODICAL: Fizika tverdogo tela, v. 3, no. 12, 1961, 3720-3730

TEXT: In the first part of this work(FTT, v. 3, no. 12, 1961, 3712-3719) it was established that the wave function obtained for the band polaron was not an exact eigenfunction of the Hamiltonian, leading to the scattering of the band states. The scattering probability is calculated with the Dirac perturbation theory (strong electron-phonon interaction). On the basis of these calculations, the expression

with

$$dw_{\sigma\sigma'} = \frac{n}{\hbar^2\omega(2\pi)^3} e^{-2S} \sum (\sigma, \sigma') d\sigma', \quad (1,20)$$

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Electrical conductivity of polar crystals ... B108/B138

$$\begin{aligned} \Sigma(\sigma, \sigma') = & Z_0(4A\sqrt{N(N+1)})[6 + \sum_i \cos a_i(\sigma + \sigma')] + \\ & + Z_0(2A\sqrt{N(N+1)})[(\sum_i (\cos a_i + \cos \sigma' a_i))^2 - \\ & - 2 \sum_i \cos a_i(\sigma + \sigma') - 12]. \end{aligned} \quad (1,21)$$

is obtained for the differential polaron scattering cross section. From this expression the lifetime of the band states can be found:

$$\tau_b = -\frac{\hbar^2}{12\pi I^2} e^{2S} \frac{1}{I_0(4A\sqrt{N(N+1)}) - 1}. \quad (1.22).$$

The band-theoretical treatment of the kinetic processes is not applicable at $l \ll a$ (l = free path, a = lattice constant). The criterion for this is $\frac{\hbar v}{\pi I} \exp A(2N + 1) \frac{1}{I_0 - 1} \approx 1$ (1.25). Mobility in the range where the band approximation is not applicable is calculated on the basis of electron transitions between localized states.

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Electrical conductivity of polar crystals ... S/181/61/003/012/024/028
B106/B138

$$u = \frac{e_0 s_0}{2\pi T} \sqrt{\frac{\pi}{kT}} e^{-\frac{E}{kT}}. \quad (2,23).$$

The results agree well with the experiments. The authors thank Corresponding Member AS USSR V. G. Levich for his interest, and V. L. Bonch-Burovich, S. I. Pekar, and S. V. Tyablikov for discussions. There are 4 figures and 6 references: 2 Soviet and 4 non-Soviet. The three references to English-language publications read as follows: R. P. Feynman. Phys. Rev., 84, 108, 1951; R. Kubo, Y. Toyozawa. Progr. Theor. Phys., 13, 160, 1955; J. Yamashita, T. Kurosawa. J. Phys. Chem. Sol., 5, 34, 1958.

ASSOCIATION: Institut elektrokhimii AN SSSR Moskva (Institute of Electrochemistry AS USSR, Moscow)

SUBMITTED: March 18, 1961 (initially) July 11, 1961 (after revision)

Card 3/3

DOGORADZE, R.R.; CHIZMADZHEV, Yu.A.

Computation for the probability of an elementary act of certain heterogeneous redox reactions. Dokl. AN SSSR 144 no.5:1077-1080 Je '62.
(MIRA 15:6)

1. Institut elektrokhimii AN SSSR. Predstavлено академиком А.Н. Frumkinym.
(Oxidation-reduction reaction) (Electromotive force)

DODONADZE, R.R.; CHIZMADZHEV, Yu.A.

Kinetics of some electrochemical redox reactions on metals.
Dokl.AN SSSR 145 no.4:849-852 Ag '62. (MIRA 15:7)

1. Institut elektrokhimii AN SSSR. Predstavлено академиком
A.N.Frankinym.
(Oxidation-reduction reaction) (Electrochemistry)

113217-63
AT/RB

BT(1)/ENG(k)/BT(m)/EDS/EIC(b)-2 AFFTC/ASD/ESD-3 Pg-4

ACCESSION NR: AP3000521

S/0020/63/150/002/0333/0336

AUTHOR: Dogonadze, R. R.; Chizmadzhev, Yu. A.TITLE: The kinetics of some electrochemical oxidation-reduction reactions on semiconductors

SOURCE: AN SSSR. Doklady, v. 150, no. 2, 1963, 333-336

TOPIC TAGS: kinetics, oxidation-reduction reactions, semiconductors, anode polarization, electrochemistry

ABSTRACT: The present paper is a further development of a theoretical study of the kinetics of oxidation-reduction reactions on semiconductors which the authors carried out previously (DAN, 145, no. 4, 1962). By comparing the kinetics of a reaction on metals and semiconductors, it was possible to study the effect of the energy spectrum of a solid body upon kinetic mechanisms.

A reaction in the semiconductor was examined mathematically.

In examining currents under unbalanced conditions, the authors encountered a number of new mechanisms which are characteristic for semiconductors. The system was examined during anode polarization. Inasmuch as no special experiments were carried out with systems of the examined type, the authors make note of only a qualitative agreement of theory with experiment. "We express our appreciation to

L 13217-63

ACCESSION NR: AF3000521

Corresponding Member of the AN SSSR V. G. Levich for his consideration and constant interest regarding this work and also to Yu. V. Pleskov, who made a number of useful suggestions." Orig. art. has: 14 formulas and 1 figure. 3

ASSOCIATION: Institut elektrokhimii Akademii nauk SSSR (Institute of Electro-chemistry, Academy of Sciences SSSR)

SUBMITTED: 04Apr62

DATE ACQ: 12Jun63

ENCL: 00

SUB CODE: CH

NO REF SOV: C03

OTHER: 001

Card 2/2

MARKIN, V.S.; CHIZMARZHEV, Yu.A.; CHIRKOV, Yu.G.

Theory of porous gas electrodes. Computation of effective
coefficients. Dokl. AN SSSR 150 no. 3:596-599 My '63.
(MIRA 16:6)

1. Institut elektrokhimii AN SSSR. Predstavлено академиком
A.N. Frumkinym.
(Electrodes) (Porous materials)

CHERNENKO, A.A.; CHIZMADZHEV, Yu.A.

On the theory of capillary equilibrium in a porous body. Dokl.
AN SSSR 151 no.2:392-395 Jl '63. (MIRA 16:7)

1. Predstavлено академиком А.Н.Фрумкиным.
(Porous materials) (Capillarity)

CHIRKOV, Yu.G.; CHIZMADZHEV, Yu.A.

Mechanism of generation of current in a gaseous porous electrode.
Report No.1: Diffusion in δ -phase. Izv.AN SSSR.Ser.khim. no.2:
225-234 F '64. (MIRA 17:3)

1. Institut elektrokhimii AN SSSR.

DOGONADZE, R.R.; CHIZMADZHEV, Yu.A.

Formulation of the Bogoliubov equation for unary functions in
the statistical theory of the electrical double layer. Zhur.
fiz. khim. 38 no.12:2979-2984 D '64.

(MIRA 18:2)

1. Institut elektrokhimii AN SSSR.

DOGONADZE, R.R.; CHIZMADZHEV, Yu.A.

Structure and capacity of the metal-fused salt separation
boundary. Dokl. AN SSSR 157 no.4:944-947 Ag '64
(MIRA 1718)

1. Institut elektrokhimii AN SSSR. Predstavлено akademikom
A.N.Frumkinyem.

FRUMKIN, A.N., akademik; SHUMILOVA, N.A., kand. khim. nauk;
CHIZMADZHEV, Yu.A., kand. fiziko-matem. nauk

15th Conference of the International Committee of Electrochemical
Thermodynamics and Kinetics held in London. Vest. AN SSSR 35 no.4:
85 Ap '65. (MIRA 18:6)

DOGONADZE, R.R.; KUZNETSOV, A.M.; CHIZMADZHEV, Yu.A.

Kinetics of some heterogeneous reactions at the semiconductor -
electrolyte interface. Zhur. fiz. khim. 38 no.5:1195-1202
My '64. (MIRA 18:12)

1. Institut elektrokhimii AN SSSR. Submitted June 8, 1963.

MARKIN, V.S.; CHIZMADZHEV, Yu.A.

Correlation function of the classical system of charged particles.
Part 1: System of unipolar particles with a neutralizing background.
Elektrokhimiia 1 no.10:1202-1211 O '65.

(MIRA 18:10)

1. Institut elektrokhimii AN SSSR.

L 21839-66 EWT(m)/ETC(f)/EWG(m)/T

ACC NR: AP6003497

(A)

SOURCE CODE: UR/0364/66/002/001/0003/0043

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AUTHOR: Chizmadzhev, Yu. A.

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ORG: Electrochemistry Institute, Academy of Sciences, SSSR, Moscow (Institut elektrokhimii Akademii nauk SSSR)

TITLE: Some problems in the theory of porous gas electrodes

SOURCE: Elektrokhimiya, v. 2, no. 1, 1966, 3-43

TOPIC TAGS: electrochemistry, electrode, ~~etc~~

ABSTRACT: The present article surveys the literature on porous gas electrodes. Only the theory of porous gas electrodes in a steady state is considered and attention is focussed on hydrogen electrodes. The review consists of six sections. The first section characterizes the porous electrodes partially filled with electrolytic solution and partially filled with gas. The second section considers capillary equilibrium in porous media. The first model, which is considered in the theory of capillary equilibrium, is one with branched capillaries, considering the degree of filling of the medium with gas at a given pressure drop and uniformity of filling

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along the thickness of the electrode. The second model considered in this section is the lattice model. It is concluded that calculations made by different methods and for different models are qualitatively identical. It was experimentally verified that the content of gas is the greatest near the surface; at low pressure the gas penetrated the porous medium only to a limited extent and at high pressure it penetrated to an indefinite depth with more uniform distribution. The third section considers the theory of porous liquid electrodes. It is concluded that in all the cases considered, the electrochemical activity of the electrode is determined by coefficients \bar{D} , $\bar{\kappa}$, and S , where \bar{D} is the mean diffusion coefficient, $\bar{\kappa}$, is the effective electrical conductivity and S is the specific surface. Section four deals with the macroscopic theory of the porous gas electrodes. This section considers reagent transport in the gaseous phase, diffusion of gas through liquid to the site of the electrochemical reaction, adsorption of gas and charge transfer, transport of current in the liquid phase. Concentration polarization in the gas phase in conjunction with the activation-ohmic state in the liquid is also treated. Special attention is given to the question of current in the film of the electrode with two pore sizes. In such a system, the electrochemical activity should pass through a maximum, which was observed for some electrode structures. It is concluded that this system should be the subject of further studies. A significant

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section is devoted to the model with intersecting gas and liquid filled pores and to porous electrodes operating under mixed kinetic conditions. The fifth section is devoted to the generation of current in an individual pore, by dividing the process into two distinct stages: (1) surface diffusion of atomic hydrogen and (2) diffusion of molecular hydrogen. The concluding sixth section deals with the generation of current in the meniscus and film region. For simplicity of representation the system is modeled by a plane semi-immersed electrode. The author expresses his gratitude to Academician A. N. Frumkin and Corresponding Member V. G. Levich for discussion of a number of problems and to V. S. Markin, A. G. Pshenichnikov and Yu. G. Chirkov for reading the manuscript and for many valuable suggestions. Orig. art. has: 20 figures and an 85 item bibliography.

SUB CODE:09,07,20/ SUBM DATE: 02Jul65/ ORIG REF: 049/ OTH REF: 036

Card 3/3 nst

L 30161-66 EWF(m)/T IJP(c) DS

ACC NR: AP6019242

(A)

SOURCE CODE: UR/0364/66/002/003/0373/0377

AUTHOR: Chizmadzhev, Yu. A.; Chirkov, Yu. G.; Belokopytov, V. P.

ORG: Institute of Electrochemistry, Academy of Sciences, SSSR (Institut elektrokhimii Akademii nauk SSSR); Scientific Research Physicochemical Institute im. L. Ya. Karpov, Moscow (Nauchno-issledovatel'skiy fiziko-khimicheskiy institut)

TITLE: Current generation in electrodes with porous surfaces

SOURCE: Elektrokhimiya, v. 2, no. 3, 1966, 373-377

TOPIC TAGS: electrode, electric current, electrochemistry, surface condition, porous material, polarization, electric potential, hydrogen, porous metal, porosity

ABSTRACT: Partially submerged electrodes with porous surfaces are investigated. Some parameters considered in deriving the polarization characteristics were: Δ_1 --thickness of the porous layer; Δ --thickness of the electrolyte film of length L ; the dimensionless polarization $\phi = e\psi/2kT$, where e =electronic charge, k =Boltzman constant and T =absolute temperature; and the dimensionless concentration $\bar{c}_s = c_s/c_0$ where c_s =the concentration of H_2 on the surface of the electrode and c_0 =concentration of H_2 on the surface layer. The current density for electrochemical changes inside the porous layer was given by

$$i = i_0 [\sqrt{\bar{c}} e^{\psi} - e^{-\psi}],$$

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where i_0 =current interchange on a smooth surface. Boundary conditions were established for the above equation and parametric curves were shown for c_s as a function of ϕ . The values for the current I were determined from the parameter $\gamma = (\Delta g S / \epsilon)^{1/2}$ where $\epsilon = 2FDc_0/Ai_0$ - another parameter which depends on the boundary conditions, g=surface porosity, F=Faraday constant and S=specific surface reactivity. Curves are given for $I=f(S)$ for different values of ϕ_0 and for $I=f(\phi_0)$, comparing porous with smooth surfaces. In the region of low polarization ($\phi_0 < 4$) the porous electrode had a current generating ability about 10 times that of the smooth electrode. Orig. art. has: 4 figures, 7 formulas.

SUB CODE: 07,20 SUBM DATE: 29Jul65/ ORIG REF: 003/ OTH REF: 001

Card 2/2 MLP

CHIZMEDZHYAN, T. A.

Chizmedzhyan, T. A. "Cases with hemiathetosis," Sbornik nauch. trudov Kliniki nerv. bolezney (Yerevansk. gos. med. in-t), I-II, 1948, p. 447-49 -- In Armenian -- Summary in Russian

So: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 13, 1949)

CHIZMEDZHYAN, T.A., mladshiy nauchn. sotrudnik

Neurological changes in some cardiovascular diseases. Vop.
kardiol. no.1:112-125 '56. (MIRA 12:9)

1. Is Sektora meditsiny AN Armyanskoy SSR.
(CARDIOVASCULAR SYSTEM--DISEASES) (NERVOUS SYSTEM)

CHIZMEDZHYAN, Tat'yana Akopovna; MIRZOYAN, G.I., otv. red.;
SHTIBEN, R.A., red.izd-va; GOROYAN, G.L., tekhn. red.

[Some problems of the clinical aspect and the therapy of neuroses with a pronounced cardiovascular syndrome] Nekotorye voprosy kliniki i terapii nevrozov s vyrazhennym serdechno-sosudistym sindromom. Erevan, Izd-vo Akad. nauk Armianskoi SSR, 1962. 56 p. (MIRA 16:4)
(NEUROSES) (CARDIOVASCULAR SYSTEM--DISEASES)

CHIZMEDZHYAN, T.A.

Changes in the nervous system in somatic forms of rheumatic fever. Zhur. eksp. i klin. med. 3.no.2:59-63'63.

(MIRA 16:10)

1. Institut kardiologii i serdechnoy khirurgii AN ArmSSR.
(RHEUMATIC FEVER) (NERVOUS SYSTEM — DISEASES)

"APPROVED FOR RELEASE: 06/12/2000

CIA-RDP86-00513R000308920010-8

CHIZOV, A.I.

"Increasing the butterfat percentage in cows," a useful motion picture.
Zhivotnovodstvo 24 no.9:92 S '62. (MIRA 15:12)
(Dairy cattle breeding) (Motion pictures in agriculture)

APPROVED FOR RELEASE: 06/12/2000

CIA-RDP86-00513R000308920010-8"

TATARKIN, R.; CHIZOV, M.

Forty-fifth anniversary of the Fedoskino painters artel. Prom.
koop.no.8:50-54 Ag '55. (MLRA 9:1)

- 1.Predsedatel' pravleniya fedoskinskey arteli (for Tatarkin).
- 2.Khudozhestvennyy rukovoditel' fedoskinskoy arteli (for Chizov).

(Moscow Province--Lacquer and lacquering)